

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (Canceled).

AI
Claim ¹/₂. (Currently Amended) ~~The path timing detecting method in a mobile communications system as claimed in claim 1~~ A path timing detecting method in a mobile communications system, in which when a plurality of mobile stations access a base station using a common channel at arbitrary timings, each mobile station transmits a preamble for notifying the base station of an occurrence of a message before actually transmitting the message, the base station transmits, in response to reception of the preamble, a transmission control signal authorizing the mobile station to transmit the message, and the mobile station that receives the transmission control signal starts transmitting the message, said path timing detecting method comprising:

a step of identifying an effective path timing range using the preamble received by base station; and

a step of detecting effective path timings in the identified path timing range using the message transmitted from the mobile station, wherein

the step of identifying the effective path timing range determines the effective path timing range as ranging from a start point to an end point, the start point being placed at a timing

previous to an earliest one of the path timings detected from the preamble received by the base station by a first time period, and the end point being placed at a timing later than a latest one of the path timings by a second time period.

[Claim 3. (Canceled).

Claim ~~4~~². (Currently Amended) ~~The base station in a mobile communications~~

A1 ~~system as claimed in claim 3~~ A base station in a mobile communications system, in which when a plurality of mobile stations access the base station using a common channel at arbitrary timings, a mobile station transmits a preamble for notifying the base station of an occurrence of a message before actually transmitting the message, the base station transmits, in response to reception of the preamble, a transmission control signal authorizing the mobile station to transmit the message, and the mobile station that receives the transmission control signal starts transmitting the message, said base station comprising:

identifying means for identifying an effective path timing range using the preamble received; and

detecting means for detecting effective path timings in the identified path timing range using the message transmitted from the mobile station, wherein

said identifying means determines the effective path timing range as ranging from a start point to an end point, the start point being placed at a timing previous to an earliest one of the path timings detected from the preamble received by the base station by a first time period, and the end point being placed at a timing later than a latest one of the path timings by a second time period.

Claim 5. (Canceled).

Claim 6. (Currently Amended) ~~The mobile communications system as claimed in~~

~~claim 5~~ A mobile communications system in which a plurality of mobile stations access a base station at any arbitrary timings using a common channel, wherein

said mobile stations each comprises:

means for transmitting a preamble for notifying said base station of an occurrence of a message before actually transmitting the message, and wherein

said base station comprises:

means for transmitting, in response to the reception of the preamble sent from said mobile station, a transmission control signal authorizing said mobile station to transmit the message;

identifying means for identifying an effective path timing range from the preamble; and

detecting means for detecting effective path timings in the identified path timing range using the message sent from said mobile station, wherein

said identifying means determines the effective path timing range as ranging from a start point to an end point, the start point being placed at a timing previous to an earliest one of the path timings detected from the preamble received by the base station by a first time period, and the end point being placed at a timing later than a latest one of the path timings by a second time period.

Claim 7. (Canceled).

AI
Claim ~~8~~¹⁴ (Currently Amended) ~~The storing medium as claimed in claim 7~~ A storing medium that stores, in a form of a communication control program, a path timing detecting method in a mobile communications system, in which when a plurality of mobile stations access a base station using a common channel at arbitrary timings, a mobile station transmits a preamble for notifying the base station of an occurrence of a message before actually transmitting the message, the base station transmits, in response to reception of the preamble, a transmission control signal authorizing the mobile station to transmit the message, and the mobile station that receives the transmission control signal starts transmitting the message, said path timing detecting method comprising: a step of identifying an effective path timing range using the preamble received by base station; and a step of detecting effective path timings in the identified path timing range using the message transmitted from the mobile station, wherein

the step of identifying the effective path timing range determines the effective path timing range as ranging from a start point to an end point, the start point being placed at a timing previous to an earliest one of the path timings detected from the preamble received by the base station by a first time period, and the end point being placed at a timing later than a latest one of the path timings by a second time period.